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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,447	04/28/2000	YOSHINORI KAMI	01165.0782	6878

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EXAMINER	
PATTERSON, MARC A	

ART UNIT	PAPER NUMBER
1772	14

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

ob 14

Office Action Summary	Application No.	Applicant(s)	
	09/530,447	KAMI ET AL.	
	Examiner	Art Unit	
	Marc A Patterson	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

NEW REJECTIONS

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 10 – 11, 13, 15 and 17 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toray Industries (Japanese Patent No. 0790747).

With regard to Claims 10 – 11, 13, 15 and 17 – 21, Toray Industries discloses an air bag (therefore bonded to have a three – dimensional contour; paragraph 0001, line 1, English translation) formed of a woven fabric (the fabric is made by weaving, therefore a plain weave; paragraph 0087, line 1, English translation) comprising polyamide fiber yarns (fiber comprising nylon; paragraph 0023, line 1, of English translation) containing a copper compound (a copper halide, therefore a copper salt; paragraph 0025, line 4 of English translation) in a mixture with alkali metal (paragraph 0025, line 6 of English translation) having a copper concentration of 150 parts per million (paragraph 0025, line 5 of English translation); each yarn comprises a plurality of filaments (yarns; paragraph 0021, lines 1 – 3 of English translation) having a fineness of 3 denier (paragraph 0029, line 2 of English translation); With regard to Claims 10 – 11, 13, 15 and 17 – 21, Toray Industries fails to disclose a product of fineness of warp or weft multiplied by weave density less than 16000 decitex times end or pick per inch, a load at 15% elongation in the range of 3 to 35N/%/inch and tensile work at break of 7000 to 30,000N%/2.54 cm, fineness of

weft multiplied by weave density which is larger than the fineness of warp multiplied by weave density and yarns having a fineness from 66 to 167 decitex.

However, Toray Industries discloses a product of square root of fineness of warp or weft multiplied by weave density of 2000 (covering factor; paragraph 0062, lines 1 – 2 of English translation), a tensile strength of 160 kilograms per 3 centimeters (paragraph 0062, lines 2 – 3 of English translation) and yarns having fineness of 500 deniers (paragraph 0021, English translation). Therefore, the product of fineness of warp and weft multiplied by weave density, tensile strength (therefore the tensile work at break and load at 15% elongation) and fineness of yarn would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the product of fineness of warp or weft multiplied by weave density, tensile strength and fineness of yarn, since the product of fineness of warp or weft multiplied by weave density, tensile strength and fineness of yarn would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Toray Industries in the absence of a showing of unexpected results. *In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

3. Claims 9, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Smith et al (U.S. Patent No. 5,378,019).

Toray Industries discloses an air bag comprising a woven polyamide fabric as discussed above. With regard to Claim 9, Toray Industries fails to disclose an air bag comprising two woven fabrics which are interwoven with each other.

Smith et al teach an air bag comprising two woven fabrics which are interwoven with each other (joined by a seam; column 3, lines 56 – 68; column 4, lines 1 – 13) for the purpose of using the air bag on the driver's side of a vehicle (column 3, lines 56 – 57). The desirability of providing for an air bag comprising two woven fabrics which are interwoven with each other in Toray Industries, which is an air bag, would therefore have been obvious to one having ordinary skill in the art.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for two woven fabrics which are interwoven with each other in Toray Industries in order to use the air bag on the driver's side of a vehicle as taught by Smith et al.

With regard to Claims 14 and 16, the air bag which is taught by Smith et al comprises a circular shape (therefore circular in plan view; column 3, lines 56 – 66; Figure 1).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Mizuki et al (U.S. Patent No. 5,637,385).

Toray Industries discloses an air bag comprising a woven polyamide fabric as discussed above. Toray Industries fails to disclose an air bag in which the birefringence of the weft is larger than that of the warp.

Mizuki et al teaches an air bag (column 1, lines 11 – 21) comprising a birefringence corresponding to a drawing ratio of 3.0 or more (column 12, lines 4 – 11) for the purpose of obtaining an air bag which is both high – strength and ultra – fine (column 12, lines 41 – 44). The desirability of providing for a birefringence corresponding to a drawing ratio of 3.0 or more in Toray Industries, which is an air bag, would therefore have been obvious to one having ordinary skill in the art.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a birefringence corresponding to a drawing ratio of 3.0 or more in Toray Industries in order to obtain an air bag which is both high – strength and ultra – fine as taught by Mizuki et al.

Mizuki et al fail to disclose a birefringence of the weft which is larger than that of the warp. However, Mizuki et al disclose birefringence corresponding to a drawing ratio of 3.0 or more as discussed above. Therefore, the birefringence of warp and weft would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the birefringence of warp and weft, since the birefringence of warp and weft would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Mizuki et al in the absence of a showing of unexpected results. *In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

ANSWERS TO APPLICANT'S ARGUMENTS

5. Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 10 – 11, 13 and 15 as being unpatentable over Toray Industries (Japanese Patent No. 0790747), 35 U.S.C. 103(a) rejection of Claims 9, 14 and 16 as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Smith et al (U.S. Patent No. 5,378,019) and 35 U.S.C. 103(a) rejection of Claim 12 as being unpatentable over Toray Industries (Japanese Patent No. 0790747) in view of Mizuki et al (U.S. Patent No. 5,637,385), of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 8 of Paper No. 13, that Toray Industries fails to disclose a product of fineness of the warp or weft of the fabric multiplied by the weave density of the fabric less that 16000 decitex end or pick / 2.54 cm. However, as stated above, Toray Industries discloses a product of square root of fineness of warp or weft multiplied by weave density of 2000 (covering factor; paragraph 0062, lines 1 – 2 of English translation), Therefore, the product of fineness of warp and weft multiplied by weave density would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the product of fineness of warp or weft multiplied by weave density, would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Toray Industries. *In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

Applicant also argues, on page 8, that the fabrics of the present invention are formed based on a fabric design concept completely different from that of Toray Industries. However, the design concept is not claimed.

Applicant also argues, on page 9, that the assertion of routine optimization is rendered moot by newly submitted Claims 17 – 21, which are directed to a yarn fineness in the range of 66 to 167; because Toray Industries teaches that a yarn fineness of 210 denier is desirable, Applicant argues, Toray Industries teaches that the disclosed base fabric cannot be formed from a yarn having a yarn size smaller than 210 denier. However, the teaching that a yarn fineness of 210 denier is desirable does not equate to a teaching against a yarn size smaller than 210 denier. Therefore, in the absence of a showing of unexpected results, it would be obvious for one of ordinary skill in the art to vary the fineness of yarn as stated above.

Applicant also argues, on page 10, that the air bag disclosed by Smith, unlike the claimed invention, comprises a neoprene backing layer. However, as stated above, Smith et al teach an air bag comprising two woven fabrics which are interwoven with each other (joined by a seam; column 3, lines 56 – 68; column 4, lines 1 – 13) for the purpose of using the air bag on the driver's side of a vehicle (column 3, lines 56 – 57). The desirability of providing for an air bag comprising two woven fabrics which are interwoven with each other in Toray Industries, which is an air bag, would therefore have been obvious to one having ordinary skill in the art.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for two woven fabrics which are interwoven with each other in Toray Industries in order to use the air bag on the driver's side of a vehicle as taught by Smith et al.

Applicant also argues, on page 10, that Mizuki does not teach a requirement that birefringence of weft is larger than that of warp. However, as stated above, Mizuki et al teaches an air bag (column 1, lines 11 – 21) comprising a birefringence corresponding to a drawing ratio of 3.0 or more (column 12, lines 4 – 11) for the purpose of obtaining an air bag which is both high – strength and ultra – fine (column 12, lines 41 – 44). The desirability of providing for a birefringence corresponding to a drawing ratio of 3.0 or more in Toray Industries, which is an air bag, would therefore have been obvious to one having ordinary skill in the art.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a birefringence corresponding to a drawing ratio of 3.0 or more in Toray Industries in order to obtain an air bag which is both high – strength and ultra – fine as taught by Mizuki et al.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.
Art Unit 1772

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

11/14/03